THE AMERICAN JOURNAL OF HUMAN GENETICS

EDITOR Peter H. Byers, M.D.University of Washington School of Medicine

Seattle, WA

MANAGING EDITOR
Roberta Wilkes
University of Washington
Seattle, WA

ASSISTANT MANAGING EDITOR Patricia Baskin University of Washington Seattle, WA

ASSOCIATE EDITORS

Gregory S. Barsh, M.D., Ph.D. Stanford University Medical Center Stanford, CA

Anne M. Bowcock, Ph.D.
University of Texas Southwestern
Medical Center
Dallas, TX

Diane W. Cox, Ph.D.The Hospital for Sick Children Toronto, Ontario

Thomas W. Glover, Ph.D. University of Michigan Ann Arbor, MI Markus Grompe, M.D.
Oregon Health Sciences
University
Portland. OR

James R. Lupski, M.D., Ph.D. Baylor College of Medicine Houston, TX

Kenneth Morgan, Ph.D. McGill University Montreal, Quebec

Roberta A. Pagon, M.D. University of Washington Seattle, WA **Richard S. Spielman, Ph.D.** University of Pennsylvania Philadelphia, PA

Barbara L. Weber, M.D. University of Pennsylvania Philadelphia, PA

James L. Weber, Ph.D. Marshfield Medical Research Foundation Marshfield, WI

Daniel E. Weeks, Ph.D.
University of Pittsburgh
Pittsburgh, PA
The Wellcome Trust Centre for
Human Genetics
Oxford

Volume 60 1997

Published Monthly for THE AMERICAN SOCIETY OF HUMAN GENETICS BY THE UNIVERSITY OF CHICAGO PRESS

THE AMERICAN SOCIETY OF HUMAN GENETICS

BOARD OF DIRECTORS

President

Larry J. Shapiro, M.D. University of California, San Francisco San Francisco, CA

President-Elect

Arthur L. Beaudet, M.D. Baylor College of Medicine Houston, TX

Ann C. M. Smith, M.A. Georgetown University Washington, DC

Treasurer

Secretary

Stephen I. Goodman, M.D. University of Colorado Health Sciences Center Denver, CO

Editor

Peter H. Byers, M.D. University of Washington School of Medicine Seattle, WA

President 1995

Judith G. Hall, M.D. University of British Columbia Vancouver, BC

President 1996

Charles J. Epstein, M.D. University of California, San Francisco San Francisco, CA

Directors

Diane Baker, M.S. University of Michigan Ann Arbor, MI

John C. Carey, M.D. University of Utah Medical Center Salt Lake City, UT

Aravinda Chakravarti, Ph.D. Case Western Reserve University School of Medicine Cleveland, OH

Michael R. Hayden, M.D., Ph.D. University of British Columbia Vancouver, BC

Judith H. Miles, M.D., Ph.D. University of Missouri Hospital Columbia, MO

Jeffrey C. Murray, M.D. University of Iowa Iowa City, IA

Philip R. Reilly, M.D., J.D. Shriver Center for Mental Retardation, Inc. Waltham, MA

Stephanie L. Sherman, Ph.D. **Emory University School of** Medicine Atlanta, GA

Stephen T. Warren, Ph.D. **Emory University School of** Medicine Atlanta, GA

Contents of Volume 60

January 1997

i	This	Month	in	the	Journal
	lohn	Ashkenas			

1 1996 ASHG PRESIDENTIAL ADDRESS Toward the 21st Century Charles J. Epstein

Invited Editorials

- 10 Variable Expressivity of patched Mutations in Flies and Humans
 Allen E. Bale
- 13 Using Genetics to Dissect Cognition Bruce F. Pennington
- 17 Empirical Evidence That Genetic Counseling Is Directive: Where Do We Go from Here?

 Barbara A. Bernhardt

Original Articles

- 21 Most Germ-Line Mutations in the Nevoid Basal Cell Carcinoma Syndrome Lead to a Premature Termination of the PATCHED Protein, and No Genotype-Phenotype Correlations Are Evident Carol Wicking, Susan Shanley, Ian Smyth, Susan Gillies, Kylie Negus, Scott Graham, Graeme Suthers, Neva Haites, Matt Edwards, Brandon Wainwright, and Georgia Chenevix-Trench
- 27 Susceptibility Loci for Distinct Components of Developmental Dyslexia on Chromosomes 6 and 15 E. L. Grigorenko, F. B. Wood, M. S. Meyer, L. A. Hart, W. C. Speed, A. Shuster, and D. L. Pauls
- **40** Nondirectiveness in Genetic Counseling: An Empirical Study Susan Michie, Faye Bron, Martin Bobrow, and Theresa M. Marteau
- 48 Duplication of Seven Exons in the Lysyl Hydroxylase Gene Is Associated with Longer Forms of a Repetitive Sequence within the Gene and Is a Common Cause for the Type VI Variant of Ehlers-Danlos Syndrome
 - Jari Heikkinen, Tarja Toppinen, Heather Yeowell, Thomas Krieg, Beat Steinmann, Kari I. Kivirikko, and Raili Myllylä
- 57 Autosomal Recessive Sorsby Fundus Dystrophy Revisited: Molecular Evidence for Dominant Inheritance Ute Felbor, Erkki A. Suvanto, Henrik R. Forsius, Aldur W. Eriksson, and Bernhard H. F. Weber
- 63 Identification of Point Mutations in 41 Unrelated Patients Affected with Menkes Disease Zeynep Tümer, Connie Lund, Jo Tolshave, Burçak Vural, Tønne Tønnesen, and Nina Horn
- 72 The Gene Encoding p44, a Subunit of the Transcription Factor TFIIH, Is Involved in Large-Scale Deletions Associated with Werdnig-Hoffmann Disease
 Lydie Bürglen, Thierry Seroz, Pierre Miniou, Suzie Lefebvre, Philippe Burlet, Arnold Munnich, Evani Viegas Pequignot, Jean-Marc Egly, and Judith Melki

- 80 Hereditary Multiple Exostoses (EXT): Mutational Studies of Familial EXT1 Cases and EXT-Associated Malignancies
 - Jacqueline T. Hecht, Deborah Hogue, Yang Wang, Susan H. Blanton, Michael Wagner, Louise C. Strong, Wendy Raskind, Mark F. Hansen, and Dan Wells
- 87 The Molecular Basis of Partial Penetrance of Splicing Mutations in Cystic Fibrosis
 Naama Rave-Harel, Eitan Kerem, Malka Nissim-Rafinia, Igal Madjar, Ran Goshen, Arie Augarten, Ayelet Rahat, Arye
 Hurwitz, Ariel Darvasi, and Batsheva Kerem
- 95 Analysis of the Phenylalanine Hydroxylase Gene in the Spanish Population: Mutation Profile and Association with Intragenic Polymorphic Markers
 Belén Pérez, Lourdes R. Desviat, and Magdalena Ugarte
- 103 Predisposition to the Fragile X Syndrome in Jews of Tunisian Descent Is Due to the Absence of AGG Interruptions on a Rare Mediterranean Haplotype

Tzipora C. Falik-Zaccai, Elena Shachak, Michal Yalon, Zvi Lis, Zvi Borochowitz, James N. Macpherson, David L. Nelson, and Evan E. Eichler

113 Molecular Characterization of a 130-kb Terminal Microdeletion at 22q in a Child with Mild Mental Retardation

Andrew C. C. Wong, Yi Ning, Jonathan Flint, Kevin Clark, Jan P. Dumanski, David H. Ledbetter, and Heather E. McDermid

121 Fine Mapping of an Imprinted Gene for Familial Nonchromaffin Paragangliomas, on Chromosome 11q23

Bora E. Baysal, Joan E. Farr, Wendy S. Rubinstein, Richard A. Galus, Karen A. Johnson, Christopher E. Aston, Eugene N. Myers, Jonas T. Johnson, Ricardo Carrau, Susan J. Kirkpatrick, David Myssiorek, Dharmdeo Singh, Sukamal Saha, Susanne M. Gollin, Glen A. Evans, Michael R. James, and Charles W. Richard, III

133 Fine Mapping of the Nail-Patella Syndrome Locus at 9q34

lain McIntosh, Mark V. Clough, Alejandro A. Schäffer, Erik G. Puffenberger, V. Kim Horton, Kathryn Peters, Margaret H. Abbott, Carmen M. Roig, Steven Cutone, Laurie Ozelius, David J. Kwiatkowski, Reed E. Pyeritz, Laura J. Brown, Richard M. Pauli, Mary Kay McCormick, and Clair A. Francomano

- 143 Genetic and Environmental Architecture of the Features of the Insulin-Resistance Syndrome Yuling Hong, Nancy L. Pedersen, Kerstin Brismar, and Ulf de Faire
- 153 mtDNA Analysis Shows Common Ancestry in Two Kindreds with X-Linked Recessive Hypoparathyroidism and Reveals a Heteroplasmic Silent Mutation
 Steven Mumm, Michael P. Whyte, Rajesh V. Thakker, Kenneth H. Buetow, and David Schlessinger
- 160 Uniparental Disomy of the Entire X Chromosome in a Female with Duchenne Muscular Dystrophy
 Franklin Quan, Joanne Janas, SuEllen Toth-Fejel, Daniel B. Johnson, Jan K. Wolford, and Bradley W. Popovich
- 166 Genomewide Search for Genes Influencing Percent Body Fat in Pima Indians: Suggestive Linkage at Chromosome 11q21-q22

R. A. Norman, D. B. Thompson, T. Foroud, W. T. Garvey, P. H. Bennett, C. Bogardus, E. Ravussin, and other members of the Pima Diabetes Gene Group

174 Evidence of a Non-MHC Susceptibility Locus in Type I Diabetes Linked to HLA on Chromosome 6

Marc Delépine, Flemming Pociot, Cellia Habita, Lara Hashimoto, Philippe Froguel, Jerome Rotter, Anne
Cambon-Thomsen, Inge Deschamps, Sami Djoulah, Jean Weissenbach, Jørn Nerup, Mark Lathrop, and Cécile Julier

188 Mapping Genes Underlying Ethnic Differences in Disease Risk by Linkage Disequilibrium in Recently Admixed Populations

Paul M. McKeigue

197 Allelic Disequilibrium and Allele Frequency Distribution as a Function of Social and Demographic History

E. A. Thompson and J. V. Neel

205 Insurance Underwriting in the Genetic Era

Robert J. Pokorski

217 Magnitude of Type I Error When Single-Locus Linkage Analysis Is Maximized over Models: A Simulation Study

Susan E. Hodge, Paula C. Abreu, and David A. Greenberg

Letters to the Editor

228 The (Ala-Val) Mutation of Methylenetetrahydrofolate Reductase as a Genetic Risk Factor for Vascular Disease in Non-Insulin-Dependent Diabetic Patients

Marie-Claude Brulhart, Philippe Dussoix, Juan Ruiz, P. Passa, Ph. Froguel, and R. W. James

229 Differences in Methylenetetrahydrofolate Reductase Genotype Frequencies, between Whites and Blacks Roger E. Stevenson, Charles E. Schwartz, Yang-zhu Du, and Myron J. Adams, Jr.

230 Prevalence and Parental Origin of De Novo 1.5-Mb Duplication in Charcot-Marie-Tooth Disease Type

Sylvia Bort, Francisco Martínez, and Francesc Palau

233 Prevalence and Parental Origin of De Novo RET Mutations in Multiple Endocrine Neoplasia Type 2A and Familial Medullary Thyroid Carcinoma

Isabelle Schuffenecker, Nicole Ginet, David Goldgar, Charis Eng, Béatrice Chambe, Andrée Boneu, Chantal Houdent, Danièle Pallo, Martin Schlumberger, Charles Thivolet, Gilbert M. Lenoir, and Le Groupe d'Étude des Tumeurs à Calcitonine

237 Expression of DAZ, an Azoospermia Factor Candidate, in Human Spermatogonia

Douglas B. Menke, George L. Mutter, and David C. Page

241 mtDNA and Y Chromosome-Specific Polymorphisms in Modern Ojibwa: Implications about the Origin of Their Gene Pool

Rosaria Scozzari, Fulvio Cruciani, Piero Santolamazza, Daniele Sellitto, David E. C. Cole, Laurence A. Rubin, Damian Labuda, Elisabetta Marini, Valeria Succa, Giuseppe Vona, and Antonio Torroni

244 Diagnostic Testing: A Cost Analysis for Prader-Willi and Angelman Syndromes

Kristin G. Monaghan, Daniel L. Van Dyke, Gerald Feldman, Anne Wiktor, and Lester Weiss

Book Review

248 The DNA Mystique: The Gene as a Cultural Icon. By Dorothy Nelkin and M. Susan Lindee; Exploding the Gene Myth. By Ruth Hubbard and Elijah Wald

Reviewed by John Ashkenas

Announcements

251 Employment and Fellowship Opportunities; Conferences; Courses; Patient Registry; Epidermolysis Bullosa Cell Bank; Cytogenetic Nomenclature; Hybrid-Mapping Panel; Call for Subjects

Information for Contributors

February 1997

i This Month in the Journal John Ashkenas

1996 WILLIAM ALLAN AWARD ADDRESS

255 Algorithms and Inferences: The Challenge of Multifactorial Diseases Robert C. Elston

1996 ASHG AWARD FOR EXCELLENCE IN EDUCATION

263 Remarks on Receiving the ASHG Award for Education Barton Childs

Invited Editorials

- 265 Polymorphisms in Drug-Metabolizing Enzymes: What Is Their Clinical Relevance and Why Do They Exist?

 Daniel W. Nebert
- 272 Molecular Genetics of the Glaucomas: Mapping of the First Five "GLC" Loci Vincent Raymond
- 278 Gene Regulation by mRNA Editing John Ashkenas

Original Articles

284 Cytochrome P450 2D6 Variants in a Caucasian Population: Allele Frequencies and Phenotypic Consequences
Christoph Sachse, Jürgen Brockmöller, Steffen Bauer, and Ivar Roots

- 296 Mapping a Gene for Adult-Onset Primary Open-Angle Glaucoma to Chromosome 3q
 M. K. Wirtz, J. R. Samples, P. L. Kramer, K. Rust, J. R. Topinka, J. Yount, R. D. Koler, and T. S. Acott
- 305 A Potential Role for NF1 mRNA Editing in the Pathogenesis of NF1 Tumors Amedeo J. Cappione, Brian L. French, and Gary R. Skuse
- 313 Mutation Analysis of BRCA1 and BRCA2 in a Male Breast Cancer Population
 Lori S. Friedman, Simon A. Gayther, Tom Kurosaki, Debbi Gordon, Barbara Noble, Graham Casey, Bruce A. J.
 Ponder, and Hoda Anton-Culver

- 320 A Mutation in the XPB/ERCC3 DNA Repair Transcription Gene, Associated with Trichothiodystrophy G. Weeda, E. Eveno, I. Donker, W. Vermeulen, O. Chevallier-Lagente, A. Taïeb, A. Stary, J. H. J. Hoeijmakers, M. Mezzina, and A. Sarasin
- 330 Mutations in the Consensus Helicase Domains of the Werner Syndrome Gene
 Chang-En Yu, Junko Oshima, Ellen M. Wijsman, Jun Nakura, Tetsuro Miki, Charles Piussan, Shellie Matthews,
 Ying-Hui Fu, John Mulligan, George M. Martin, Gerard D. Schellenberg, and the Werner's Syndrome Collaborative
 Group
- 342 Identification of Mutations in Cystatin B, the Gene Responsible for the Unverricht-Lundborg Type of Progressive Myoclonus Epilepsy (EPM1)
 Maria D. Lalioti, Maria Mirotsou, Catherine Buresi, Manuel Claude Peitsch, Colette Rossier, Réda Ouazzani, Michel Baldy-Moulinier, Armand Bottani, Alain Malafosse, and Stylianos E. Antonarakis
- 352 Cloning of the Human Type XVII Collagen Gene (COL17A1), and Detection of Novel Mutations in Generalized Atrophic Benign Epidermolysis Bullosa

 Biljana Gatalica, Leena Pulkkinen, Kehua Li, Kirsti Kuokkanen, Markku Ryynänen, John A. McGrath, and Jouni Uitto
- 366 Molecular Basis for Duarte and Los Angeles Variant Galactosemia S. D. Langley, K. Lai, P. P. Dembure, L. N. Hjelm, and L. J. Elsas
- 373 A New mtDNA Mutation Showing Accumulation with Time and Restriction to Skeletal Muscle K. Weber, J. N. Wilson, L. Taylor, E. Brierley, M. A. Johnson, D. M. Turnbull, and L. A. Bindoff
- 381 Clustering of Caucasian Leber Hereditary Optic Neuropathy Patients Containing the 11778 or 14484 Mutations on an mtDNA Lineage
 Michael D. Brown, Fengzhu Sun, and Douglas C. Wallace
- 388 Sequence Variation at the Phenylalanine Hydroxylase Gene in the British Isles
 L. A. Tyfield, A. Stephenson, F. Cockburn, A. Harvie, J. L. Bidwell, N. A. P. Wood, D. T. Pilz, P. Harper, and I. Smith
- 397 Characterization of Recombination in the HLA Class II Region Michael Cullen, Janelle Noble, Henry Erlich, Karen Thorpe, Stephan Beck, William Klitz, John Trowsdale, and Mary Carrington
- 408 Homopolymeric Tract Heteroplasmy in mtDNA from Tissues and Single Oocytes: Support for a Genetic Bottleneck
 D. R. Marchington, G. M. Hartshorne, D. Barlow, and J. Poulton
- Short Alleles Revealed by PCR Demonstrate No Heterozygote Deficiency at Minisatellite Loci D157, D7S21, and D12S11
 Alonso, A. Castro, I. Fernández-Fernández, and M. M. de Pancorbo
- **426** A Variant of Freeman-Sheldon Syndrome Maps to 11p15.5-pter
 P. A. Krakowiak, J. R. O'Quinn, J. F. Bohnsack, W. S. Watkins, J. C. Carey, L. B. Jorde, and M. Bamshad
- 433 Genetic Effects on Variation in Red-Blood-Cell Folate in Adults: Implications for the Familial Aggregation of Neural Tube Defects Laura E. Mitchell, David L. Duffy, Patrick Duffy, Glenda Bellingham, and Nicholas G. Martin
- 439 Apolipoprotein E and Alzheimer Disease: Genotype-Specific Risks by Age and Sex Heike Bickeböller, Dominique Campion, Alexis Brice, Philippe Amouyel, Didier Hannequin, Olivier Didierjean, Christiane Penet, Cosette Martin, Jordi Pérez-Tur, Agnès Michon, Bruno Dubois, François Ledoze, Catherine Thomas-Anterion, Florence Pasquier, Michèle Puel, Jean-François Demonet, Olivier Moreaud, Marie-Claude Babron, Didier Meulien, David Guez, Marie-Christine Chartier-Harlin, Thierry Frebourg, Yves Agid, Maria Martinez, and Françoise Clerget-Darpoux

447 Estimating the Age of Alleles by Use of Intraallelic Variability

Montgomery Slatkin and Bruce Rannala

Letters to the Editor

- 459 Improved Set of Short-Tandem-Repeat Polymorphisms for Screening the Human Genome Bo Yuan, David Vaske, James L. Weber, John Beck, and Val C. Sheffield
- 460 The Effect of Parental Gender on the GAA Dynamic Mutation in the FRDA Gene Luigi Pianese, Francesca Cavalcanti, Giuseppe De Michele, Alessandro Filla, Giuseppe Campanella, Olga Calabrese, Imma Castaldo, Antonella Monticelli, and Sergio Cocozza
- 463 Contamination of Sequence Databases with Adaptor Sequences Takeo Yoshikawa, Alan R. Sanders, and Sevilla D. Detera-Wadleigh

Announcements

467 Employment Opportunities; Meetings; Call for Submissions

Information for Contributors

March 1997

i This Month in the Journal John Ashkenas

Invited Editorial

469 Genetics and Epidemiology, Congenital Anomalies and Cancer Jan M. Friedman

Original Articles

- 474 Congenital Anomalies and Childhood Cancer in Great Britain Steven A. Narod, Michael M. Hawkins, Clare M. Robertson, and Charles A. Stiller
- 486 Mutations in BRCA1 and BRCA2 in Breast Cancer Families: Are There More Breast Cancer—Susceptibility Genes?
 Olga M Serova, Sylvie Mazoyer, Nadine Puget, Valérie Dubois, Patricia Tonin, Yin Y. Shugart, David Goldgar, Steven A. Narod, Henry T. Lynch, and Gilbert M. Lenoir
- 496 Prevalence and Contribution of BRCA1 Mutations in Breast Cancer and Ovarian Cancer: Results from Three U.S. Population-Based Case-Control Studies of Ovarian Cancer Alice S. Whittemore, Gail Gong, and Jacqueline Itnyre
- The Founder Mutations 185delAG and 5382insC in BRCA1 and 6174delT in BRCA2 Appear in 60% of Ovarian Cancer and 30% of Early-Onset Breast Cancer Patients among Ashkenazi Women

 Dvorah Abeliovich, Luna Kaduri, Israela Lerer, Naomi Weinberg, Gail Amir, Michal Sagi, Joël Zlotogora, Norman Heching, and Tamar Peretz

515 The Mutational Spectrum in Treacher Collins Syndrome Reveals a Predominance of Mutations That Create a Premature-Termination Codon

Sara J. Edwards, Amanda J. Gladwin, and Michael J. Dixon

525 Molecular Cloning of the Human UMP Synthase Gene and Characterization of Point Mutations in Two Hereditary Orotic Aciduria Families

Mariko Suchi, Haruo Mizuno, Yoko Kawai, Takashi Tsuboi, Satoshi Sumi, Kazuki Okajima, Mark E. Hodgson, Hisamitsu Ogawa, and Yoshiro Wada

540 Dominant Inheritance of Isolated Hypermethioninemia Is Associated with a Mutation in the Human Methionine Adenosyltransferase 1A Gene

Margaret E. Chamberlin, Tsuneyuki Ubagai, S. Harvey Mudd, Harvey L. Levy, and Janice Yang Chou

- 547 Mutations in the COL5A1 Gene Are Causal in the Ehlers-Danlos Syndromes I and II
 Anne De Paepe, Lieve Nuytinck, Ingrid Hausser, Ingrun Anton-Lamprecht, and Jean-Marie Naeyaert
- Anne De Paepe, Lieve Hoyanek, ingra Hausser, ingran Anton-Lampreent, and Jean-Maine Nacyaert

555 A Unique Point Mutation in the Fibroblast Growth Factor Receptor 3 Gene (FGFR3) Defines a New Craniosynostosis Syndrome

M. Muenke, K. W. Gripp, D. M. McDonald-McGinn, K. Gaudenz, L. A. Whitaker, S. P. Bartlett, R. I. Markowitz, N. H. Robin, N. Nwokoro, J. J. Mulvihill, H. W. Losken, J. B. Mulliken, A. E. Guttmacher, R. S. Wilroy, L. A. Clarke, G. Hollway, L. C. Adès, E. A. Haan, J. C. Mulley, M. M. Cohen, Jr., G. A. Bellus, C. A. Francomano, D. M. Moloney, S. A. Wall, A. O. M. Wilkie, and E. H. Zackai

565 Partial Correction of a Severe Molecular Defect in Hemophilia A, because of Errors during Expression of the Factor VIII Gene

Michele Young, Hiroshi Inaba, Leon W. Hoyer, Miyoko Higuchi, Haig H. Kazazian, Jr., and Stylianos E. Antonarakis

574 Angelman Syndrome Associated with an Inversion of Chromosome 15q11.2q24.3

Valerie Greger, Joan H. M. Knoll, Joseph Wagstaff, Elizabeth Woolf, Paulena Lieske, Heather Glatt, Peter A. Benn, Sally S. Rosengren, and Marc Lalande

581 Skewed X-Chromosome Inactivation in Female Carriers of Dyskeratosis Congenita

Koenraad Devriendt, Gert Matthijs, Eric Legius, Els Schollen, Daniel Blockmans, Chris van Geet, Hugo Degreef, Jean-Jacques Cassiman, and Jean-Pierre Fryns

588 Localization of a Gene for an Autosomal Recessive Form of Juvenile Parkinsonism to Chromosome 6q25.2-27

Hiroto Matsumine, Masaaki Saito, Satoe Shimoda-Matsubayashi, Hajime Tanaka, Atsushi Ishikawa, Yuko Nakagawa-Hattori, Masayuki Yokochi, Tomonori Kobayashi, Shuichi Igarashi, Hiroki Takano, Kazuhiro Sanpei, Ryoko Koike, Hideo Mori, Tomoyoshi Kondo, Yoshihiko Mizutani, Alejandro A. Schäffer, Yasuhiro Yamamura, Shigenobu Nakamura, Shigeki Kuzuhara, Shoji Tsuji, and Yoshikuni Mizuno

597 Mapping One Form of Autosomal Dominant Postaxial Polydactyly Type A to Chromosome 7p15-q11.23 by Linkage Analysis

Uppala Radhakrishna, Jean-Louis Blouin, Hamid Mehenni, Uday C. Patel, Manoj N. Patel, Jitendra V. Solanki, and Stylianos E. Antonarakis

605 The Gene for the Ataxia-Telangiectasia Variant, Nijmegen Breakage Syndrome, Maps to a 1-cM Interval on Chromosome 8q21

Kathrin Saar, Krystyna H. Chrzanowska, Markus Stumm, Martin Jung, Gudrun Nürnberg, Thomas F. Wienker, Eva Seemanová, Rolf-Dieter Wegner, André Reis, and Karl Sperling

611 Localization, by Linkage Analysis, of the Cystinuria Type III Gene to Chromosome 19q13.1

Luigi Bisceglia, María Julia Calonge, Antonio Totaro, Lidia Feliubadaló, Salvatore Melchionda, Judith García, Xavier Testar, Michele Gallucci, Alberto Ponzone, Lepoldo Zelante, Antonio Zorzano, Xavier Estivill, Paolo Gasparini, Virginia Nunes, and Manuel Palacín

7

617 Molecular Analysis of Cystinuria in Libyan Jews: Exclusion of the SLC3A1 Gene and Mapping of a New Locus on 19q

Robert Wartenfeld, Eliahu Golomb, Giora Katz, Sherri J. Bale, Boleslaw Goldman, Mordechai Pras, Daniel L. Kastner, and Elon Pras

625 Hereditary Spastic Paraplegia: LOD-Score Considerations for Confirmation of Linkage in a Heterogeneous Trait

Marie-Pierre Dubé, Melinda A. Mlodzienski, Zoha Kibar, Martin R. Farlow, George Ebers, Peter Harper, Edwin H. Kolodny, Guy A. Rouleau, and Denise A. Figlewicz

- 630 Anticipation or Ascertainment Bias in Schizophrenia? Penrose's Familial Mental Illness Sample
 Anne S. Bassett and Janice Husted
- 638 The Age Dependency of Gene Expression for Plasma Lipids, Lipoproteins, and Apolipoproteins Harold Snieder, Lorenz J. P. van Doornen, and Dorret I. Boomsma
- Familiality of Physical and Metabolic Characteristics That Predict the Development of Non-Insulin-Dependent Diabetes Mellitus in Pima Indians
 H. Sakul, R. Pratley, L. Cardon, E. Ravussin, D. Mott, and C. Bogardus
- 657 Efficient Strategies for Genome Scanning Using Maximum-Likelihood Affected-Sib-Pair Analysis
 Peter Holmans and Nick Craddock
- 667 Segregation Analysis of Cryptogenic Epilepsy and an Empirical Test of the Validity of the Results Ruth Ottman, W. Allen Hauser, Christie Barker-Cummings, Joseph H. Lee, and Neil Risch
- 676 Transmission-Disequilibrium Tests for Quantitative Traits
 David B. Allison
- 691 Power Studies for the Transmission/Disequilibrium Tests with Multiple Alleles N. L. Kaplan, E. R. Martin, and B. S. Weir
- 703 Detecting Disease-Predisposing Variants: The Haplotype Method
 Ana M. Valdes and Glenys Thomson
- 717 HLA Class II DR-DQ Amino Acids and Insulin-Dependent Diabetes Mellitus: Application of the Haplotype Method

Ana M. Valdes, Shannon McWeeney, and Glenys Thomson

Letters to the Editor

- 729 Nonsense Mutations and Altered Splice-Site Selection Harry C. Dietz
- 730 CAG Repeat Expansions in Bipolar and Unipolar Disorders

Lilijana Oruč, Kerstin Lindblad, Geert R. Verheyen, Susanne Ahlberg, Miro Jakovljević, Sladana Ivezić, Peter Raeymaekers, Christine Van Broeckhoven, and Martin Schalling

732 Deletion at 12p in a Japanese Child with Brachydactyly Overlaps the Assigned Locus of Brachydactyly with Hypertension in a Turkish Family

Sylvia Bähring, Toshiro Nagai, Hakan R. Toka, Inna Nitz, Okan Toka, Atakan Aydin, Astrid Mühl, Thomas F. Wienker, Herbert Schuster, and Friedrich C. Luft

- 735 LOD Wars: The Affected-Sib-Pair Paradigm Strikes Back!

 Martin Farrall
- 738 Reply to Farrall
 David A. Greenberg, Susan E. Hodge, Veronica J. Vieland, and M. Anne Spence
- 738 HLA Sharing and History of Miscarriage among Women with Rheumatoid Arthritis
 Paul Brennan
- 740 The Phenotypic Difference Discards Sib-Pair QTL Linkage Information Fred A. Wright

Book Reviews

- 743 The Genetics of Cancer. By B. A. J. Ponder and M. J. Waring Reviewed by Barbara L. Weber
- 744 Congenital Malformations of the Brain: Pathological, Embryological, Clinical, Radiological, and Genetic Aspects. By Margaret G. Norman, Barbara McGillivray, Dagmar K. Kalousek, Alan Hill, and Ken Poskitt Reviewed by William B. Dobyns

Announcements

745 Employment and Fellowship Opportunities; Meetings; Symposia; Summer Institute; Research Material Available; Call for Patients

Errata

- 748 Mapping Quantitative-Trait Loci in Humans by Use of Extreme Concordant Sib Pairs: Selected Sampling by Parental Phenotypes, by Zhang and Risch (October 1996 [59:951–957])
- 749 A Recombination Hot Spot in the Rh Genes Revealed by Analysis of Unrelated Donors with the Rare D-- Phenotype, by Kemp et al. (November 1996 [59:1066-1073])
- 750 A Translocation at 12q2 Refines the Interval Containing the Holt-Oram Syndrome 1 Gene, by Terrett et al. (December 1996 [59:1337-1342])

Information for Contributors

April 1997

i This Month in the Journal John Ashkenas

Invited Editorials

751 Aberrant Methylation in Cancer Rogier Versteeg

755 Phylogenetic Estimation in Humans and Neck Riddles

Rebecca L. Cann

Review

758 Nonsyndromic Hearing Impairment: Unparalleled Heterogeneity

Guy Van Camp, Patrick J. Willems, and Richard J. H. Smith

Original Articles

765 Somatic Inactivation of the VHL Gene in Von Hippel-Lindau Disease Tumors

Amanda H. Prowse, Andrew R. Webster, Frances M. Richards, Stephane Richard, Sylviane Olschwang, François Resche, Nabeel A. Affara, and Eamonn R. Maher

772 Archaic African and Asian Lineages in the Genetic Ancestry of Modern Humans

Rosalind M. Harding, S. M. Fullerton, R. C. Griffiths, Jacquelyn Bond, Martin J. Cox, Julie A. Schneider, Danielle S. Moulin, and J. B. Clegg

790 Mutational Analysis of the PEX Gene in Patients with X-Linked Hypophosphatemic Rickets

Ingrid A. Holm, Xin Huang, and Louis M. Kunkel

798 Unusual Patterns of Exon Skipping in Bruton Tyrosine Kinase Are Associated with Mutations Involving the Intron 17 3' Splice Site

Robert H. Haire, Yuko Ohta, Scott J. Strong, Ronda T. Litman, Yunying Liu, Josef T. Prchal, Max D. Cooper, and Gary W. Litman

808 Characterization of the Recombination Hot Spot Involved in the Genomic Rearrangement Leading to the Hybrid *D-CE-D* Gene in the D^{VI} Phenotype

Giorgio Matassi, Baya Chérif-Zahar, Isabelle Mouro, and Jean-Pierre Cartron

818 Parental Somatic and Germ-Line Mosaicism for a FBN2 Mutation and Analysis of FBN2 Transcript Levels in Dermal Fibroblasts

Elizabeth A. Putnam, Eun-Sook Park, Cora M. Aalfs, Raoul C. M. Hennekam, and Dianna M. Milewicz

828 Mutation Analysis of the HLA-H Gene in Italian Hemochromatosis Patients

M. Carella, L. D'Ambrosio, A. Totaro, A. Grifa, M. A. Valentino, A. Piperno, D. Girelli, A. Roetto, B. Franco, P. Gasparini, and C. Camaschella

833 The G1021A Substitution in the RYR1 Gene Does Not Cosegregate with Malignant Hyperthermia Susceptibility in a British Pedigree

A. M. Adeokun, S. P. West, F. R. Ellis, P. J. Halsall, P. M. Hopkins, A. M. Foroughmand, D. E. Iles, R. L. Robinson, A. D. Stewart, and J. L. Curran

842 The Prevalence and Wide Clinical Spectrum of the Spinocerebellar Ataxia Type 2 Trinucleotide Repeat in Patients with Autosomal Dominant Cerebellar Ataxia

Daniel H. Geschwind, Susan Perlman, Carla P. Figueroa, Lucy J. Treiman, and Stefan M. Pulst

851 Molecular Analysis of Velo-Cardio-Facial Syndrome Patients with Psychiatric Disorders

C. Carlson, D. Papolos, R. K. Pandita, G. L. Faedda, S. Veit, R. Goldberg, R. Shprintzen, R. Kucherlapati, and B. Morrow

860 Molecular Characterization of Patients with 18q23 Deletions

Gordon Strathdee, Robert Sutherland, Jon J. Jonsson, Robert Sataloff, Maija Kohonen-Corish, Deborah Grady, and Joan Overhauser

- 869 Further Delineation of Renal-Coloboma Syndrome in Patients with Extreme Variability of Phenotype and Identical PAX2 Mutations
 - Lisa A. Schimmenti, Heather E. Cunliffe, Leslie A. McNoe, Teresa A. Ward, Michelle C. French, Heather H. Shim, Yao-Hua Zhang, Willem Proesmans, Anita Leys, Kyna A. Byerly, Stephen R. Braddock, Mitsuno Masuno, Kiyoshi Imaizumi, Koen Devriendt, and Michael R. Eccles
- 879 Different Mechanisms Underlie DNA Instability in Huntington Disease and Colorectal Cancer Geoffrey M. Goellner, David Tester, Stephen Thibodeau, Elisabeth Almqvist, Y. Paul Goldberg, Michael R. Hayden, and Cynthia T. McMurray
- 891 Genetic Localization of a Newly Recognized Autosomal Dominant Limb-Girdle Muscular Dystrophy with Cardiac Involvement (LGMD1B) to Chromosome 1q11-21

 A. J. van der Kooi, M. van Meegen, T. M. Ledderhof, E. M. McNally, M. de Visser, and P. A. Bolhuis
- 896 Assignment of the Mulibrey Nanism Gene to 17q by Linkage and Linkage-Disequilibrium Analysis
 Kristiina Avela, Marita Lipsanen-Nyman, Jaakko Perheentupa, Carina Wallgren-Pettersson, Sylvie Marchand, Sabine
 Fauré, Pertti Sistonen, Albert de la Chapelle, and Anna-Elina Lehesjoki
- 903 A Gene for Dominant Nonspecific X-Linked Mental Retardation Is Located in Xq28 Vincent des Portes, Pierre Billuart, Alain Carrié, Lucien Bachner, Thierry Bienvenu, Marie Claude Vinet, Cherif Beldjord, Gérard Ponsot, Axel Kahn, Joelle Boué, and Jamel Chelly
- 910 X-Linked Recessive Panhypopituitarism Associated with a Regional Duplication in Xq25-q26
 Maria Lagerström-Fermér, Mats Sundvall, Elsy Johnsen, Garry L. Warne, Susan M. Forrest, Jeffrey D. Zajac, Anne Rickards, David Ravine, Ulf Landegren, and Ulf Pettersson
- 917 Meiotic Origin of Trisomy in Confined Placental Mosaicism Is Correlated with Presence of Fetal Uniparental Disomy, High Levels of Trisomy in Trophoblast, and Increased Risk of Fetal Intrauterine Growth Restriction
 - W. P. Robinson, I. J. Barrett, L. Bernard, A. Telenius, F. Bernasconi, R. D. Wilson, R. G. Best, P. N. Howard-Peebles, S. Langlois, and D. K. Kalousek
- 928 Autism or Atypical Autism in Maternally but Not Paternally Derived Proximal 15q Duplication Edwin H. Cook, Jr., Valerie Lindgren, Bennett L. Leventhal, Rachel Courchesne, Alan Lincoln, Cory Shulman, Catherine Lord, and Eric Courchesne
- 935 PCR-Based Screening for Cystic Fibrosis Carrier Mutations in an Ethnically Diverse Pregnant Population Wayne W. Grody, Christine Dunkel-Schetter, Zina H. Tatsugawa, Michelle A. Fox, Carolyn Y. Fang, Rita M. Cantor, Jessica M. Novak, Harold N. Bass, and Barbara F. Crandall
- 948 A Prospective Study of Cognitive Health in the Elderly (Oregon Brain Aging Study): Effects of Family History and Apolipoprotein E Genotype
 Haydeh Payami, Holly Grimslid, Barry Oken, Richard Camicioli, Gary Sexton, Alison Dame, Diane Howieson, and Jeffrey Kaye
- 957 Ethnic-Affiliation Estimation by Use of Population-Specific DNA Markers
 Mark D. Shriver, Michael W. Smith, Li Jin, Amy Marcini, Joshua M. Akey, Ranjan Deka, and Robert E. Ferrell
- 965 Strategies for Mapping Heterogeneous Recessive Traits by Allele-Sharing Methods Eleanor Feingold and David O. Siegmund
- 979 Combining Information Within and Between Pedigrees for Mapping Complex Traits
 Jun Teng and David Siegmund

Letters to the Editor

993 Mosaicism of the CAG Repeat in CNS Tissue in Relation to Age at Death in Spinocerebellar Ataxia Type 1 and Machado-Joseph Disease Patients

Patrícia Maciel, Iscia Lopes-Cendes, Stephen Kish, Jorge Sequeiros, and Guy A. Rouleau

997 Possible Narrowed Assignment of the Loci of Monosomy 21-Associated Microcephaly and Intrauterine Growth Retardation to a 1.2-Mb Segment at 21q22.2

Naomichi Matsumoto, Hirofumi Ohashi, Masato Tsukahara, Kyoung Chang Kim, Eiichi Soeda, and Norio Niikawa

999 Methylenetetrahydrofolate Reductase Thermolabile Variant and Human Longevity

Laurence Faure-Delanef, Isabelle Quéré, Jean François Chassé, Oxana Guerassimenko, Muriel Lesaulnier, Hélène Bellet, Jacqueline Zittoun, Pierre Kamoun, and Daniel Cohen

- 1001 Reply to Stoneking: Ancient DNA—How Do You Really Know when You Have It?

 Alan Cooper
- 1002 Reply to Cooper

Eliane Béraud-Colomb, Régine Roubin, Josiane Martin, Nicolas Maroc, Armelle Gardeisen, Guy Trabuchet, and Michel Goossens

1003 Germ-Line and Somatic Mosaicism in the Androgen Insensitivity Syndrome: Implications for Genetic Counseling

A. L. M. Boehmer, A. O. Brinkmann, M. F. Niermeijer, L. Bakker, D. J. J. Halley, and S. L. S. Drop

1006 Differentiating between Fetal and Maternal Genotypic Effects, Using the Transmission Test for Linkage Disequilibrium

Laura E. Mitchell

Book Review

1008 Fetal Pathology. By Jean W. Keeling

Reviewed by Dagmar K. Kalousek

Announcements

1009 Employment and Residency Opportunities; Meetings; Canadian Genetic Diseases Network; Twin Registry Survey; Call for Subjects

Erratum

1012 Nonsyndromic Cleft Lip With or Without Cleft Palate: New BCL3 Information, by Amos et al. (September 1996 [59:743-744])

Information for Contributors

May 1997

i This Month in the Journal John Ashkenas

Invited Editorial

1013 Population Genetics of BRCA1 and BRCA2

Csilla I. Szabo and Mary-Claire King

Original Articles

- 1021 BRCA1 Sequence Variations in 160 Individuals Referred to a Breast/Ovarian Family Cancer Clinic Dominique Stoppa-Lyonnet, Pierre Laurent-Puig, Laurent Essioux, Sabine Pagès, Ghislaine Ithier, Laurent Ligot, Alain Fourquet, Rémy J. Salmon, Krishna B. Clough, Pierre Pouillart, the Institut Curie Breast Cancer Group, Catherine Bonaïti-Pellié, and Gilles Thomas
- 1031 BRCA2 in American Families with Four or More Cases of Breast or Ovarian Cancer: Recurrent and Novel Mutations, Variable Expression, Penetrance, and the Possibility of Families Whose Cancer Is Not Attributable to BRCA1 or BRCA2

Elizabeth L. Schubert, Ming K. Lee, Heather C. Mefford, Rhodora H. Argonza, Jan E. Morrow, Judy Hull, Jamie L. Dann, and Mary-Claire King

1041 A High Proportion of Novel Mutations in BRCA1 with Strong Founder Effects among Dutch and Belgian Hereditary Breast and Ovarian Cancer Families

T. Peelen, M. van Vliet, A. Petrij-Bosch, R. Mieremet, C. Szabo, A. M. W. van den Ouweland, F. Hogervorst, R. Brohet, M. J. L. Ligtenberg, E. Teugels, R. van der Luijt, A. H. van der Hout, J. J. P. Gille, G. Pals, I. Jedema, R. Olmer, I. van Leeuwen, B. Newman, M. Plandsoen, M. van der Est, G. Brink, S. Hageman, P. J. W. Arts, M. M. Bakker, H. W. Willems, E. van der Looij, B. Neyns, M. Bonduelle, R. Jansen, J. C. Oosterwijk, R. Sijmons, H. J. M. Smeets, C. J. van Asperen, H. Meijers-Heijboer, J. G. M. Klijn, J. de Greve, M.-C. King, F. H. Menko H. G. Brunner, D. Halley, G.-J. B. van Ommen, H. F. A. Vasen, C. J. Cornelisse, L. J. van 't Veer, P. de Knijff, E. Bakker, and P. Devilee

1050 A Low Proportion of BRCA2 Mutations in Finnish Breast Cancer Families

Paula Vehmanen, Lori S. Friedman, Hannaleena Eerola, Laura Sarantaus, Seppo Pyrhönen, Bruce A. J. Ponder, Timo Muhonen, and Heli Nevanlinna

1059 Founder BRCA1 and BRCA2 Mutations in Ashkenazi Jews in Israel: Frequency and Differential Penetrance in Ovarian Cancer and in Breast-Ovarian Cancer Families

Ephrat Levy-Lahad, Raphael Catane, Shlomit Eisenberg, Bella Kaufman, Gila Hornreich, Ella Lishinsky, Mordechai Shohat, Barbara L. Weber, Uziel Beller, Amnon Lahad, and David Halle

1068 Moderate Frequency of BRCA1 and BRCA2 Germ-Line Mutations in Scandinavian Familial Breast Cancer

Sara Håkansson, Oskar Johannsson, Ulla Johansson, Gunilla Sellberg, Niklas Loman, Anne-Marie Gerdes, Eva Holmberg, Niklas Dahl, Nikos Pandis, Ulf Kristoffersson, Håkan Olsson, and Åke Borg

1079 Study of a Single BRCA2 Mutation with High Carrier Frequency in a Small Population

Steinunn Thorlacius, Stefan Sigurdsson, Helga Bjarnadottir, Gudridur Olafsdottir, Jon Gunnlaugur Jonasson, Laufey Tryggvadottir, Hrafn Tulinius, and Jorunn E. Eyfjörd

1085 Screening for 185delAG in the Ashkenazim

C. Sue Richards, Patricia A. Ward, Benjamin B. Roa, Lois C. Friedman, Alfred A. Boyd, Gretchen Kuenzli, J. Kay Dunn, and Sharon E. Plon

1099 Novel Mutations and DNA-Based Screening in Non-Jewish Carriers of Tay-Sachs Disease

Beverly R. Akerman, Marvin R. Natowicz, Michael M. Kaback, Magali Loyer, Eric Campeau, and Roy A. Gravel

1107 Haplotype and Phylogenetic Analyses Suggest That One European-Specific mtDNA Background Plays a Role in the Expression of Leber Hereditary Optic Neuropathy by Increasing the Penetrance of the Primary Mutations 11778 and 14484

Antonio Torroni, Maurizio Petrozzi, Leila D'Urbano, Daniele Sellitto, Massimo Zeviani, Franco Carrara, Carla Carducci, Vincenzo Leuzzi, Valerio Carelli, Piero Barboni, Annamaria De Negri, and Rosaria Scozzari

1122 Identification of Common Cystic Fibrosis Mutations in African-Americans with Cystic Fibrosis Increases the Detection Rate to 75%

Milan Macek, Jr., Alice Mackova, Ada Hamosh, Bettina C. Hilman, Robert F. Selden, Gerard Lucotte, Kenneth J. Friedman, Michael R. Knowles, Beryl J. Rosenstein, and Garry R. Cutting

1128 Multiple Independent Molecular Etiology for Limb-Girdle Muscular Dystrophy Type 2A Patients from Various Geographical Origins

I. Richard, L. Brenguier, P. Dinçer, C. Roudaut, B. Bady, J.-M. Burgunder, R. Chemaly, C. A. Garcia, G. Halaby, C. E. Jackson, D. M. Kurnit, G. Lefranc, C. Legum, J. Loiselet, L. Merlini, A. Nivelon-Chevallier, E. Ollagnon-Roman, G. Restagno, H. Topaloglu, and J. S. Beckmann

- 1139 Linkage Disequilibrium and Physical Mapping of X-Linked Juvenile Retinoschisis
 Laura Huopaniemi, Anne Rantala, Esa Tahvanainen, Albert de la Chapelle, and Tiina Alitalo
- 1150 A Gene for Isolated Congenital Ptosis Maps to a 3-cM Region within 1p32-p34.1 Elizabeth C. Engle, Adrian E. Castro, Margaret E. Macy, Joan H. M. Knoll, and Alan H. Beggs
- 1158 A Genomewide Linkage Study of Preeclampsia/Eclampsia Reveals Evidence for a Candidate Region on 4q

 Gayan A Harrison, Karen E Humphrey, Narelle Jones, Renee Badenhon, Guanglan Guo, George Elakis, Judith A

Gavan A. Harrison, Karen E. Humphrey, Narelle Jones, Renee Badenhop, Guanglan Guo, George Elakis, Judith A. Kaye, Rachel J. Turner, Madonna Grehan, Alan N. Wilton, Shaun P. Brennecke, and Desmond W. Cooper

1168 A Gene for Autosomal Dominant Nonsyndromic Hearing Loss (DFNA12) Maps to Chromosome 11q22-24

Kristien Verhoeven, Guy Van Camp, Paul J. Govaerts, Wendy Balemans, Isabelle Schatteman, Margriet Verstreken, Lut Van Laer, Richard J. H. Smith, Matthew R. Brown, Paul H. Van de Heyning, Thomas Somers, F. Erwin Offeciers, and Patrick J. Willems

- 1174 Genetic Relationships of Asians and Northern Europeans, Revealed by Y-Chromosomal DNA Analysis
 Tatiana Zerjal, Bumbein Dashnyam, Arpita Pandya, Manfred Kayser, Lutz Roewer, Fabrício R. Santos, Wulf
 Schiefenhövel, Neale Fretwell, Mark A. Jobling, Shinji Harihara, Koji Shimizu, Dashnyam Semjidmaa, Antti Sajantila,
 Pia Salo, Michael H. Crawford, Evgeny K. Ginter, Oleg V. Evgrafov, and Chris Tyler-Smith
- 1184 Molecular Analysis of Deletion (17)(p11.2p11.2) in a Family Segregating a 17p Paracentric Inversion: Implications for Carriers of Paracentric Inversions
 Samuel P. Yang, Sanjay I. Bidichandani, Luis E. Figuera, Ramesh C. Juyal, Paul J. Saxon, Antonio Baldini, and Pragna I. Patel
- 1194 The DiGeorge Syndrome Minimal Critical Region Contains a Goosecoid-like (GSCL) Homeobox Gene That Is Expressed Early in Human Development Shoshanna Gottlieb, Beverly S. Emanuel, Deborah A. Driscoll, Beatrice Sellinger, Zhili Wang, Bruce Roe, and Marcia L. Budarf
- 1202 The Likelihood of Being Affected with Huntington Disease by a Particular Age, for a Specific CAG Size R. R. Brinkman, M. M. Mezei, J. Theilmann, E. Almqvist, and M. R. Hayden
- 1211 Cost-Effective Sib-Pair Designs in the Mapping of Quantitative-Trait Loci Hongyu Zhao, Heping Zhang, and Jerome I. Rotter

1222 Optimal Strategies for Mapping Complex Diseases in the Presence of Multiple Loci David E. Goldgar and Douglas F. Easton

Letters to the Editor

1233 Recurrent Germ-Line BRCA1 Mutations in Extended African American Families with Early-Onset Breast Cancer

Qing Gao, Susan Neuhausen, Shelly Cummings, Michael Luce, and Olufunmilayo I. Olopade

1236 BRCA2 Mutations in Hereditary Breast and Ovarian Cancer in France

Olga M. Serova-Sinilnikova, Laetitia Boutrand, Dominique Stoppa-Lyonnet, Brigitte Bressac-de-Paillerets, Valérie Dubois, Christine Lasset, Nicolas Janin, Yves-Jean Bignon, Michel Longy, Christine Maugard, Rosette Lidereau, Dominique Leroux, Thierry Frebourg, Sylvie Mazoyer, and Gilbert M. Lenoir

- 1239 Frequently Occurring Germ-Line Mutations of the *BRCA1* Gene in Ovarian Cancer Families from Russia Simon A. Gayther, Patricia Harrington, Paul Russell, Galina Kharkevich, R. F. Garkavtseva, and Bruce A. J. Ponder
- 1242 Analysis of BRCA1 and BRCA2 Mutations in Hungarian Families with Breast or Breast-Ovarian Cancer Susan J. Ramus, Zsofia Kote-Jarai, Lori S. Friedman, Marco van der Looij, Simon A. Gayther, Bela Csokay, Bruce A. J. Ponder, and Edith Olah
- 1246 Noncomplementation of Radiation-Induced Chromosome Aberrations in Ataxia-Telangiectasia/ Ataxia-Telangiectasia-Variant Heterodikaryons Markus Stumm, Karl Sperling, and Rolf-Dieter Wegner
- 1251 Atypical Friedreich Ataxia Caused by Compound Heterozygosity for a Novel Missense Mutation and the GAA Triplet-Repeat Expansion
 Sanjay I. Bidichandani, Tetsuo Ashizawa, and Pragna I. Patel
- 1256 Anticipation in Pediatric Malignancies
 Sharon E. Plon

Book Review

1258 Crafting Science: A Sociohistory of the Quest for the Genetics of Cancer. By Joan H. Fujimura Reviewed by John Ashkenas

Announcements

1261 Employment and Fellowship Opportunities; Meetings; Cancer Short Course; Request for Proposals; Complex-Disorders Collection; Call for Patients

Erratum

1264 Molecular Heterogeneity of Late-Onset Forms of Globoid-Cell Leukodystrophy, by De Gasperi et al. (December 1996 [59:1233–1242])

Information for Contributors

June 1997

i This Month in the Journal

Behavioral Genetics '97

1265 ASHG Statement

Recent Developments in Human Behavioral Genetics: Past Accomplishments and Future Directions
Stephanie L. Sherman, John C. DeFries, Irving I. Gottesman, John C. Loehlin, Joanne M. Meyer, Mary Z. Pelias, John Rice, and Irwin Waldman

- 1276 Genetic Influences in Childhood-Onset Psychiatric Disorders: Autism and Attention-Deficit/ Hyperactivity Disorder Susan L. Smalley
- 1283 Understanding the Genetic Basis of Mood Disorders: Where Do We Stand?

 Victor I. Reus and Nelson B. Freimer
- 1289 Genetics of Narcolepsy and Other Sleep Disorders Emmanuel Mignot

Invited Editorials

- 1303 To Fire the Train: A Second Malignant-Hyperthermia Gene Kirk Hogan
- 1309 Searching for Gene Defects That Cause High Bone Mass Michael P. Whyte
- 1312 The Great Escape
 Christine M. Disteche

Original Articles

- 1316 Malignant-Hyperthermia Susceptibility Is Associated with a Mutation of the α1-Subunit of the Human Dihydropyridine-Sensitive L-Type Voltage-Dependent Calcium-Channel Receptor in Skeletal Muscle Nicole Monnier, Vincent Procaccio, Paul Stieglitz, and Joël Lunardi
- 1326 Linkage of a Gene Causing High Bone Mass to Human Chromosome 11 (11q12-13)
 Mark L. Johnson, Guodong Gong, William Kimberling, Susan M. Recker, Donald B. Kimmel, and Robert R. Recker
- 1333 Expression of Genes from the Human Active and Inactive X Chromosomes
 Carolyn J. Brown, Laura Carrel, and Huntington F. Willard
- 1344 Three Novel Homozygous Point Mutations and a New Polymorphism in the COL17A1 Gene: Relation to Biological and Clinical Phenotypes of Junctional Epidermolysis Bullosa
 Hauke Schumann, Nadja Hammami-Hauasli, Leena Pulkkinen, Alain Mauviel, Wolfgang Küster, Ursula Lüthi, Katsushi Owaribe, Jouni Uitto, and Leena Bruckner-Tuderman
- 1354 Characterization of FMR1 Promoter Elements by In Vivo-Footprinting Analysis
 Sabine Schwemmle, Esther de Graaff, Heidrun Deissler, Dieter Gläser, Doris Wöhrle, Ingo Kennerknecht, Walter Just,
 Ben A. Oostra, Walter Dörfler, Walther Vogel, and Peter Steinbach

- 1363 Functional and Structural Features of a Tandem Duplication of the Human mtDNA Promoter Region Huiling Hao, Giovanni Manfredi, and Carlos T. Moraes
- 1373 Molecular Epidemiology and Diagnosis of PBG Deaminase Gene Defects in Acute Intermittent Porphyria

H. Puy, J. C. Deybach, J. Lamoril, A. M. Robreau, V. Da Silva, L. Gouya, B. Grandchamp, and Y. Nordmann

- 1384 Spectrum of Mutations in the OCRL1 Gene in the Lowe Oculocerebrorenal Syndrome
 Ti Lin, Bonnie M. Orrison, Ann-Marie Leahey, Sharon F. Suchy, David J. Bernard, Richard A. Lewis, and Robert L. Nussbaum
- 1389 A Rare Branch-Point Mutation Is Associated with Missplicing of Fibrillin-2 in a Large Family with Congenital Contractural Arachnodactyly

 Cheryl Maslen, Darcie Babcock, Michael Raghunath, and Beat Steinmann
- 1399 Identification of Mutations in the Duplicated Region of the Polycystic Kidney Disease 1 Gene (PKD1) by a Novel Approach
 Belén Peral, Vicki Gamble, Carol Strong, Albert C. M. Ong, Jackie Sloane-Stanley, Klaus Zerres, Christopher G. Winearls, and Peter C. Harris
- 1411 Identification of Proximal Spinal Muscular Atrophy Carriers and Patients by Analysis of SMN^T and SMN^C Gene Copy Number
 P. E. McAndrew, D. W. Parsons, L. R. Simard, C. Rochette, P. N. Ray, J. R. Mendell, T. W. Prior, and A. H. M. Burghes
- 1423 Haplotype and Mutation Analysis in Japanese Patients with Wilson Disease Manoj S. Nanji, Van T. T. Nguyen, Jean H. Kawasoe, Koji Inui, Fumio Endo, Takashi Nakajima, Toshiharu Anezaki, and Diane W. Cox
- 1430 Intracellular Mitochondrial Triplasmy in a Patient with Two Heteroplasmic Base Changes S. K. Bidooki, M. A. Johnson, Z. Chrzanowska-Lightowlers, L. A. Bindoff, and R. N. Lightowlers
- 1439 Haplotype Analysis of Hemochromatosis: Evaluation of Different Linkage-Disequilibrium Approaches and Evolution of Disease Chromosomes
 Richard S. Ajioka, Lynn B. Jorde, Jeffrey R. Gruen, Ping Yu, Diana Dimitrova, Jalene Barrow, Evette Radisky, Corwin Q. Edwards, Linda M. Griffen, and James P. Kushner
- 1448 Haplotypes of Angiotensinogen in Essential Hypertension

 Xavier Jeunemaitre, Ituro Inoue, Christopher Williams, Anne Charru, Jean Tichet, Mike Powers, Arya Mitra Sharma,

 Anne-Paule Gimenez-Roqueplo, Akira Hata, Pierre Corvol, and Jean-Marc Lalouel
- 1461 Homozygosity and Linkage-Disequilibrium Mapping of the Urofacial (Ochoa) Syndrome Gene to a 1-cM Interval on Chromosome 10q23-q24
 Cong-Yi Wang, Bobbilynn Hawkins-Lee, Bernardo Ochoa, R. Dixon Walker, and Jin-Xiong She
- 1468 Localization of a Novel X-Linked Progressive Cone Dystrophy Gene to Xq27: Evidence for Genetic Heterogeneity
 A. A. B. Bergen and A. J. L. G. Pinckers
- 1474 A New Locus for Dominant "Zonular Pulverulent" Cataract, on Chromosome 13

 Donna Mackay, Alexander Ionides, Vanita Berry, Anthony Moore, Shomi Bhattacharya, and Alan Shiels
- 1479 Lysinuric Protein Intolerance (LPI) Gene Maps to the Long Arm of Chromosome 14
 Tuija Lauteala, Pertti Sistonen, Marja-Liisa Savontaus, Juha Mykkänen, Jaakko Simell, Mari Lukkarinen, Olli Simell, and Pertti Aula

1487 Genetic Mapping Using Microcell-Mediated Chromosome Transfer Suggests a Locus for Nijmegen Breakage Syndrome at Chromosome 8q21-24

Shinya Matsuura, Corry Weemaes, Dominique Smeets, Hideki Takami, Noriko Kondo, Shuuichi Sakamoto, Nozomi Yano, Asako Nakamura, Hiroshi Tauchi, Satoru Endo, Mitsuo Oshimura, and Kenshi Komatsu

- 1495 Skewed Segregation of the mtDNA nt 8993 (T→G) Mutation in Human Oocytes Rozanne B. Blok, Debra A. Gook, David R. Thorburn, and Hans-Henrik M. Dahl
- 1502 Heritability of Longitudinal Changes in Coronary-Heart-Disease Risk Factors in Women Twins Yechiel Friedlander, Melissa A. Austin, Beth Newman, Karen Edwards, Elizabeth J. Mayer-Davis, and Mary-Claire King
- 1513 Fine-Scale Genetic Mapping Based on Linkage Disequilibrium: Theory and Applications Momiao Xiong and Sun-Wei Guo

Letters to the Editor

- 1532 The Val985Met Insulin-Receptor Variant in the Danish Caucasian Population: Lack of Associations with Non-Insulin-Dependent Diabetes Mellitus or Insulin Resistance
 Lars Hansen, Torben Hansen, Jesper O. Clausen, Søren M. Echwald, Søren A. Urhammer, Søren K. Rasmussen, and Oluf Pedersen
- 1535 Absence of Mutations Raises Doubts about the Role of the 70-kD Peroxisomal Membrane Protein in Zellweger Syndrome

 Barbara C. Paton, Sarah E. Heron, Paul V. Nelson, C. Phillip Morris, and Alfred Poulos
- 1539 Disease Relevance of the So-Called Secondary Leber Hereditary Optic Neuropathy Mutations
 Sabine Hofmann, Reimar Bezold, Michaela Jaksch, Petra Kaufhold, Bert Obermaier-Kusser, and Klaus-Dieter Gerbitz
- 1542 A Mutation in the MTM1 Gene Invalidates a Previous Suggestion of Nonallelic Heterogeneity in X-Linked Myotubular Myopathy
 C. Guiraud-Chaumeil, M. C. Vincent, J. Laporte, M. Fardeau, F. Samson, and J.-L. Mandel
- 1544 Detection of an Atypical 22q11 Deletion That Has No Overlap with the DiGeorge Syndrome Critical Region
 Hilary O'Donnell, Carole McKeown, Clive Gould, Bernice Morrow, and Peter Scambler
- 1548 Linkage Disequilibrium between the Spinocerebellar Ataxia 3/Machado-Joseph Disease Mutation and Two Intragenic Polymorphisms, One of Which, X359Y, Affects the Stop Codon Giovanni Stevanin, Anne-Sophie Lebre, Cécile Mathieux, Géraldine Cancel, Nacer Abbas, Olivier Didierjean, Alexandra Dürr, Yvon Trottier, Yves Agid, and Alexis Brice
- 1552 A Common mtDNA Polymorphism Associated with Variation in Plasma Triglyceride Concentration Robert A. Hegele, Bernard Zinman, Anthony J. G. Hanley, Stewart Harris, and Philip W. Connelly
- 1555 Up-Regulation of the Brain and Purkinje-Cell Forms of Dystrophin Transcripts, in Becker Muscular Dystrophy
 Akinori Nakamura, Shu-ichi Ikeda, Masahide Yazaki, Kunihiro Yoshida, Osamu Kobayashi, Nobuo Yanagisawa, and Shin'ichi Takeda
- 1558 Bilateral Retinoblastoma in a Male Patient with an X;13 Translocation: Evidence for Silencing of the RB1 Gene by the Spreading of X Inactivation

 Carrie Jones, Carol Booth, Debra Rita, Lydia Jazmines, Birgit Brandt, Anna Newlan, and Bernhard Horsthemke

1562 Meiotic Drive at the Myotonic Dystrophy and the Cone-Rod Dystrophy Loci on Chromosome 19q13.3

Chris F. Inglehearn and Cheryl Y. Gregory

Book Reviews

- **1564** *Mouse Genetics.* By Lee M. Silver Reviewed by Gregory S. Barsh
- 1565 Genetic Variation and Human Disease: Principles and Evolutionary Approaches. By Kenneth M. Weiss Reviewed by Joseph D. Terwilliger
- 1566 Gene Therapy: A Primer for Physicians. 2d ed. By Kenneth Culver Reviewed by Karen Kozarsky
- 1567 Life as We Know It: A Father, a Family, and an Exceptional Child. By Michael Bérubé Reviewed by Virginia P. Sybert
- 1567 Chromosome Abnormalities and Genetic Counseling. By R. J. McKinlay Gardner and Grant R. Sutherland Reviewed by Albert Schinzel
- 1568 Molecular Biology Made Simple and Fun. By David P. Clark and Lonnie D. Russell Reviewed by John Ashkenas

Announcements

1569 Employment and Fellowship Opportunities; Workshop

Erratum

- 1571 Transmission-Disequilibrium Tests for Quantitative Traits, by Allison (March 1997 [60:676-690])
- 1572 Author Index for Volume 60
- 1580 Subject Index for Volume 60
- 1589 Contents of Volume 60

Information for Contributors